

Subject: Science

Grade: Fourth

Standard: #2 The Nature of Science and Technology

**Key Concept:** Measuring instruments can be used to gather accurate information for making scientific comparisons of objects and events and for designing and constructing things that will work properly.

**Generalization:** Weather can be described by using instruments to measure quantities such as temperature, wind direction and speed.

**Background:**

The students have been studying weather and have made several different working weather instruments. This is the culminating activity and will last at least one week— longer if you have time. The students are placed in groups according to their preferred style of learning: visual, auditory, and kinesthetic. They will be working together to prepare and deliver a daily weather forecast for the school. This can be done over the school's telecommunication system, intercom, or videotaped and the tapes sent to each classroom in the school. Depending on the sophistication of the students, you may choose the forecast to be local, state, national, or a combination of these.

This lesson is tiered in *product* according to *learning style*.

**Tier I: *Visual Learners***

Students in this tier will prepare the weather maps (can be done on dry erase boards or various other means so a new outline does not have to be done each time) and read the weather instruments. The number of instruments read may depend on the sophistication of the students. If you are going to determine state or national weather, students will need to listen to the morning weather before coming to school and/or have the weather maps from the newspaper available to them.

### **Tier II: *Auditory/Oral Learners***

Students in this tier will be the “weather people,” since they will be doing the actual broadcast. They will work with the material from the Tier I group to make the weather forecast and deliver it orally through the appropriate medium.

### **Tier III: *Kinesthetic Learners***

These students will make sure all equipment is working properly, be responsible for setting up the equipment and “weather station,” run all equipment, plan camera angles, lighting, and sound levels, and any other technical aspect necessary to the completion of the broadcast.

### **Assessment:**

Accurate prediction based on available data will serve as an assessment for the entire broadcast. Each tier’s product can be assessed through a rubric that details the responsibilities of that tier and how well that responsibility was preformed.

Students can compare and contrast their weather forecast with that of the local weather station. Discussions can center around such questions as why a particular weather phenomenon such as rain did or did not occur as predicted, why there might be variations in temperature, wind speed, etc. between the weather station and the student-gathered data, and other such issues. You might want to take a field trip to the local weather station and present the meteorologist with a copy of that day’s weather prediction by the class. Perhaps you could persuade the station to show the class’ broadcast on television.